AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings of claims in the application:

LISTING OF CLAIMS:

1-38. (canceled)

39. (new) A monitoring device for a dye bath adapted to be combined with a dyeing machine comprising at least one liquid circulation circuit containing a portion of said dye bath, that comprises:

- a transparency sensor for the liquid contained in said bath adapted to supply a signal representing the transparency of said portion of the dye bath for at least one spectral range and

- positioning means for positioning the transparency sensor in a said liquid circulation circuit.

40. (new) The monitoring device of claim 39, wherein the positioning means comprises a sensor support adaptable to said liquid circulation circuit.

41. (new) The monitoring device of claim 39, wherein the positioning means comprises a displacement means for said sensor adapted to move the sensor into or outside the portion of the dye bath contained in the liquid circulation circuit.

42. (new) The monitoring device of claim 41, wherein said displacement means comprises a piston placed transversely with respect to said liquid circulation circuit.

43. (new) The monitoring device of claim 39, that further comprises control means that control the end of a dyeing period of the dyeing machine or the end of a rinse period of the dyeing machine according to the evolution of the bath's transparency.

44. (new) The monitoring device according to claim 43, wherein the control means are adapted to determine the end of the dyeing period or the end of the rinse period when the derivative for the transparency value is below a predefined value.

45. (new) The monitoring device of claim 39, that further comprises closed-loop control means that control the transparency sensor's sensitivity according to the signal representing the transparency of the said portion of the dye bath.

46. (new) The monitoring device of claim 39, that further comprises closed-loop control means that control the optic path taken by a light ray generated by the transparency sensor in said portion of the dye bath according to the signal representing the transparency of said portion of the dye bath.

47. (new) The monitoring of claim 46, that further comprises an adjusting means for adjusting the thickness of a sample of dye bath whose transparency is captured by the

transparency sensor, wherein the closed-loop control means are adapted to control the adjusting means for adjusting said thickness in such a manner that the sample thickness is increased according to the transparency of the bath represented by the signal provided by the transparency sensor.

48. (new) The monitoring device of claim 47, wherein the adjusting means that adjusts thickness is adapted to displace, with relation to each other, a light source and at least one optical fiber.

49. (new) The monitoring device of claim 39, that further comprises closed-loop control means for controlling a capture period of time for the transparency sensor according to the transparency of said portion of the dye bath.

50. (new) The monitoring device of claim 39, that further comprises closed-loop control means for controlling amplification means that amplifies the signal/noise ratio of said signal representing the transparency of said portion of dye bath, according to said transparency.

51. (new) The monitoring device of claim 39, that further comprises control means that control the acidity and/or the salinity of the dye bath according to evolution of the transparency of said portion of dye bath.

52. (new) The monitoring device of claim 39, that further comprises control means that control the temperature of

the bath according to evolution of the transparency of said portion of the dye bath.

53. (new) The monitoring device of claim 39, that further comprises control means that control a quantity of clean water introduced into the dye bath according to evolution of the transparency of said portion of the dye bath.

54. (new) The monitoring device of claim 39, that further comprises control means that control the quantity of colorant introduced into the dye bath according to evolution of the transparency of said portion of the dye bath.

55. (new) The monitoring device of claim 39, that further comprises control means that control the quantity of chemical components introduced into the dye bath according to evolution of the transparency of said portion of the dye bath.

56. (new) The monitoring device of claim 39, that further comprises a taking means for taking a sample of the dye bath and a separating means for separating said sample from the dye bath and leaving said sample to rest for a period, the transparency sensor being adapted to sense the transparency of the sample separated from the dye bath.

57. (new) The monitoring device of claim 39, wherein the transparency sensor comprises a transparency measurement chamber for liquid coming from the dye bath comprising a light source adapted to successively output light in a plurality of different spectral bands, a single optoelectronic sensor adapted

to receive the light rays coming from the light source after their passage through the measurement chamber and to output a signal representing the quantity of light received by said sensor and a demodulator synchronized with the light source to successively process the signals coming from the sensor to supply results corresponding to the different spectral bands successively output by the light source.

58. (new) A dye bath monitoring method intended to be utilized in a dye bath monitoring device combined with a dyeing machine comprising at least one liquid circulation circuit comprising the dye bath, characterized in that it comprises:

- a step of positioning a transparency sensor in a said liquid circulation circuit comprising the dye bath and

- a step of capturing the transparency of the liquid contained in said bath, during which a signal representing the transparency of said bath is provided for at least one color.